



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,269	12/01/2003	Murali Basavaiah	ANDIP037/425584	3368
22434	7590	06/27/2008	EXAMINER	
BEYER WEAVER LLP			UNELUS, ERNEST	
P.O. BOX 70250				
OAKLAND, CA 94612-0250				
			ART UNIT	PAPER NUMBER
			2181	
			MAIL DATE	DELIVERY MODE
			06/27/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/726,269	Applicant(s) BASAVIAH ET AL.	
	Examiner ERNEST UNELUS	Art Unit 2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-20 and 24-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-20 and 24-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>02/14/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

RESPONSE TO AMENDMENT

Claim rejections based on prior art

Applicant's arguments filed 02/14/2008, with respect to the rejection(s) of claim(s) 1-20 and 24-27 under Mullendore et al. (US 2003/0185154) and Beukema et al. (US pat. 6,978,300) have been fully considered and is not persuasive.

As previously stated in the last office action: [The applicant argues that, Mullendore and Beukema, the cited references, do not disclose "send a transfer ready command frame to the Host before receiving the transfer ready command from the target, wherein the transfer ready command received from the target is suppressed." And "sending a transfer ready command using the initialized RX_ID value to the host prior to receiving the transfer ready command from the target, wherein sending the transfer ready command to the host allows the switch to operate as a proxy for the target", as recited in claims 1, 24, and 27.

In regards to "send a transfer ready command frame to the initiating Host before receiving the transfer ready command from the target", see fig. 5 and paragraph 0064 of Mullendore, which discloses "When Fast Write is disabled, RTT messages are passed transparently from target to initiator". Clearly, fig. 5 shows XFER_RDY 128KB being sent from the switch 150 before it is received at the initiator (base on the arrow). As paragraph 0064 discloses, "RTT messages are passed transparently from target to initiator". This XFER_RDY 128KB is shown to be coming from the target. "wherein the transfer ready command received from the target is suppressed" (see fig. 5 and paragraph 0072 of

Mullendore, which discloses putting the transfer ready command to an ‘end’. The word ‘suppressed’ is being interpreted as to put and end or to come to a stop).

Mullendore fail to expressly discloses, a frame having a header with an OX_ID or RX_ID and initializing either the OX_ID or RX_ID of the write command header.

Paragraph 0018 of the applicant’s specification discloses, “As previously noted, the OX_ID field 32 and the RX_ID field 34 are each 16 bits wide and are used for identifying the originating Host and target device”.

Similarly, Beukema discloses a data packet 712 of fig. 7 having routing header 716 and transport header 718, which are use to identify a source and a destination target; in the same way that a RX_ID is used to specifies a target. See col. 10, lines 58-65. In other words, OX-ID and RX_ID are being interpreted as addresses for a source and a destination. In regards to *initializing either the OX_ID or RX_ID of the write command header*, in col. 10, lines 49-50, Beukema discloses “Routers, also modify the packet's network header when the packet crosses a subnet boundary”. Modifying is being interpreted as to initializing. Col. 11, lines 36-38 discloses, “The network header includes routing information, such as the destination IP address and other network routing information”].

With respect to {*"modifying the originator exchange identifier (OX ID) of the write command to include the initialized RX ID value to generate a modified write command," and "forwarding the modified write command to the target"*}, please note that the examiner is interpreting ‘to include’ the RX_ID as to the RX_ID being associated with the OX-ID.

Please see the office action below in regards to the newly amended claims.

The applicant has cancelled claim 4.

INFORMATION CONCERNING OATH/DECLARATION

Oath/Declaration

1. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in **37 C.F.R. 1.63**.

INFORMATION CONCERNING DRAWINGS

Drawings

2. The applicant's drawings submitted are acceptable for examination purposes.

REJECTIONS BASED ON PRIOR ART

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-3, 5-20, and 24-31**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Mullendore et al. (US 2003/0185154) in view of Beukema et al. (US pat. 6,978,300).

5. As per **claims 1 and 31**, Mullendore discloses an apparatus, comprising:

a port (**paragraph 0027 discloses “the switch device typically includes a processor, a buffer, a first port for coupling to a low speed or TCP/IP based network link”**) configured to receive a write command frame (write 16MB) defining an initiating Host (**initiator 135**) and a target (**target 145**) (see **fig. 4 and paragraph 0054**);

a trapping mechanism (**paragraph 0046 discloses the buffer held the command within the switch**) configured to trap the write command frame; and

a processor (**the processor within the switch, as discloses in paragraph 0027**) configured to process the trapped write command (see **paragraphs 0029 and 0061, which discloses the processor within the switch is able partially transfer the write command**) by modifying the OX-ID of the write command header to include a value (**The claim does not preclude OX_ID of the write command from being selected and transmitted every time due to the word “or” in the claim language. Because of “or”, OX_ID by itself can be selected and has been selected by the examiner. The applicant need to claim a Markush type claim; in other words, the applicant should include “a group consisting...” after ‘with’; see chapter 803.02 [R-5] of the MPEP for further detail**); wherein the processor is further configured to initialize a receiver exchange identifier (RX ID) of a transfer ready command with the value (**The claim does not preclude RX_ID of the write command from being selected and transmitted every time due to the word “or” in the claim language. Because of “or”, OX_ID by itself can be selected and has been selected by the examiner. The applicant need to claim a Markush type claim; in other words, the applicant should include “a group consisting...” after ‘with’. Therefore, the examiner chooses to select OX_ID, which**

automatically lead to the RX_ID not being selected for transmission; see chapter 803.02 [R-5] of the MPEP for further detail) and send a the transfer ready command frame to the initiating Host before receiving a transfer ready command from the target(see fig. 5 and paragraph 0064, which discloses “When Fast Write is disabled, RTT messages are passed transparently from target to initiator”. Clearly, fig. 5, shows XFER_RDY 128KB being sent from the switch 150 before it is received at the initiator (base on the arrow). As paragraph 0064 discloses, “RTT messages are passed transparently from target to initiator”. This XFER_RDY 128KB is shown to be coming from the target).

but fails to disclose expressly a frame having a header with an OX_ID or RX_ID and modifying the OX_ID of the write command header.

Paragraph 0018 of the applicant’s specification discloses “As previously noted, the OX_ID field 32 and the RX_ID field 34 are each 16 bits wide and are used for identifying the originating Host and target device”.

Similarly, Beukema discloses a data packet 712 of fig. 7 having routing header 716 and transport header 718, which are use to identify a source and a destination target; in the same way that a RX_ID is used to specifies a target. See col. 10, lines 58-65. In other words, OX-ID and RX_ID are being interpreted as addresses for a source and a destination. In regards to modifying *the RX_ID of the write command header*, in col. 10, lines 49-50, Beukema discloses “Routers, also modify the packet's network header when the packet crosses a subnet boundary”. Col. 11, lines 36-38 discloses, “The network header includes routing information, such as the destination IP address and other network routing information”.

Mullendore et al. (US 2003/0185154) and Beukema et al. (US pat. 6,978,300) are analogous art because they are from the same field of endeavor of packet switching in a wide area network (WAN) and/or local area network (LAN).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify a congestion management systems and methods are provided to overcome head-of-line blocking issues resulting from slower-speed network links, such as low speed WAN links or links using a TCP/IP based storage protocol as described by Mullendore and a mechanism by which modifications to components of the network fabric may be made without tearing down existing connections as taught by Beukema.

The motivation for doing so would have been because Beukema teaches, **“The method and apparatus provide a mechanism by which modifications to components of the network fabric may be made without tearing down existing connections. The apparatus and method facilitate such fabric management by placing send queues in a send queue drain state and suspending the send queues affected by changes to the network fabric while the modifications are being made. Once the modifications are complete, the send queues are place back into an operational state”** (see col. 2, lines 31-38).

Therefore, it would have been obvious to combine Beukema et al. (US pat. 6,978,300) with Mullendore et al. (US 2003/0185154) for the benefit of creating the apparatus to obtain the invention as specified in claims 1 and 31.

6. As per **claim 2**, the combination of Mullendore and Beukema discloses “the apparatus of claim 1” [See rejection to claim 1 above], Mullendore further discloses, “wherein the Switch (150) is an initiating Switch coupled to the Host (135) in a first SAN (165) (see fig. 4).

7. As per **claim 3**, the combination of Mullendore and Beukema discloses “the apparatus of claim 2” [See rejection to claim 2 above], “wherein the processor of the initiating Switch (165) is further configured to modify the write command before forwarding the write command to the target (145) (paragraphs 0029 and 0061 of Mullendore, discloses the processor within the switch, and paragraph 0077 discloses the switch being a router. Col. 10, lines 49-50, of Beukema discloses “Routers, also modify the packet's network header when the packet crosses a subnet boundary”).

8. As per **claim 8 and 15**, the combination of Mullendore and Beukema discloses “the apparatus of claim 3” [See rejection to claim 3 above], “wherein the initiating Switch (150) is further configured to modify the write command (**write 16MB**) by modifying the OX_ID value for the write command before forwarding the write command to the target (**Paragraph 0018 of the applicant's specification discloses “As previously noted, the OX_ID field 32 and the RX_ID field 34 are each 16 bits wide and are used for identifying the originating Host and target device”**. Similarly, Beukema discloses a data packet 712 of fig. 7 having routing header 716 and transport header 718, which are use to identify a source and a destination target; in the same way that a RX_ID is used to specifies a target. See col. 10, lines 58-65. In other words, OX-ID and RX_ID are being interpreted as addresses for a source and a destination. In regards to *modifying either the OX_ID or RX_ID of the write command*

header, in col. 10, lines 49-50, Beukema discloses “Routers, also modify the packet's network header when the packet crosses a subnet boundary”. Col. 11, lines 36-38 discloses, “The network header includes routing information, such as the destination IP address and other network routing information”).

9. As per claim 5, the combination of Mullendore and Beukema discloses “the apparatus of claim 4” [See rejection to claim 4 above], “wherein the initiating Switch (150) uses the initialized RX_ID value as a handle for accessing information pertaining to the write command session in a sessions ID table (see claim 4 above and col. 14, lines 6-20 of Beukema).

10. As per claim 6, the combination of Mullendore and Beukema discloses “the apparatus of claim 4” [See rejection to claim 4 above], Mullendore discloses “wherein the processor of the initiating Switch (135) is further configured to issue a Transfer Ready command (XFER_RDY 256KB) to the Host (135) (see fig. 4).

11. As per claim 7, the combination of Mullendore and Beukema discloses “the apparatus of claim 5” [See rejection to claim 5 above], “wherein the initiating Switch (150) is further configured to initialize and use the initialized RX_ID value for all communication related to the write frame (16MB) between the initiating Switch (150) and the Host (135) (see paragraph 0061 and fig. 4 of Mullendore and 10, lines 49-65 of Beukema).

12. As per claim 9, the combination of Mullendore and Beukema discloses “the apparatus of claim 2” [See rejection to claim 2 above], Mullendore discloses, “wherein the initiating Switch (150) is further configured to transfer additional data frames (256KB) (paragraph 0061

discloses that the switch separate the command into smaller portions and send those portions (256KB) separately to the target) to the target (145) when the initiating Switch (150) receives a Transfer Ready command (XFER_RDY 256KB) associated with the write frame (write 16MB) from the target (see fig. 4).

13. As per **claim 10**, the combination of Mullendore and Beukema discloses “the apparatus of claim 1” [See **rejection to claim 1 above**], Mullendore discloses, “wherein the Switch (140) is a target Switch coupled to the target (145) (see fig. 4).

14. As per **claim 11**, the combination of Mullendore and Beukema discloses “the apparatus of claim 10” [See **rejection to claim 10 above**], Mullendore discloses, “wherein the target Switch (140) forwards the write command (16MB) to the target (145) (see fig. 4).

15. As per **claims 12 and 25**, the combination of Mullendore and Beukema discloses “the apparatus of claim 10” [See **rejection to claim 10 above**], Mullendore discloses, “wherein the target Switch (140) forwards data frames (128KB) associated with the write command (16MB) to the target (145) after receiving a Transfer Ready command (XFER_RDY 128KB) from the target (145) (see fig. 4).

16. As per **claim 13**, the combination of Mullendore and Beukema discloses “the apparatus of claim 12” [See **rejection to claim 12 above**], Mullendore discloses, “wherein the target Switch (140) is further configured to buffer the data frames (128KB) prior to receipt of the Transfer Ready command (XFER_RDY 128KB) see paragraph 0061 and fig. 4.

17. As per **claim 14**, the combination of Mullendore and Beukema discloses “the apparatus of claim 12” [See rejection to claim 12 above], “wherein target Switch (140) is further configured to maintain **(the buffer inside the switch having a identified data)** a sessions ID table and to use the OX_ID of the write command as an index to the session corresponding to the write command **(see paragraphs 0054 and 0061 of Mullendore and col. 14, lines 6-20 of Beukema)**).

18. As per **claim 16**, the combination of Mullendore and Beukema discloses “the apparatus of claim 5” [See rejection to claim 5 above], wherein the target Switch (140) is further configured to modify the OX_ID value with communications between the target Switch (140) and the target (145) **(see paragraphs 0029 and 0061 of Mullendore and col. 10, lines 58-65 and Col. 11, lines 36-38 of Beukema)**.

19. As per **claim 17**, the combination of Mullendore and Beukema discloses “the apparatus of claim 1” [See rejection to claim 1 above], wherein the Switch is further configured to use the RX_ID value of trapped write commands to specify the amount of buffer space needed for the write command and use the write command frame to request the needed buffer space **(see paragraph 0061 of Mullendore and fig. 7 of Beukema)**.

20. As per **claims 18 and 26**, the combination of Mullendore and Beukema discloses “the apparatus of claim 17” [See rejection to claim 17 above], wherein the Switch (150) is further configured to use the RX_ID value of trapped write commands **(write 16MB)** to specify the amount of buffer space larger than needed for the write command and use the additional buffer

space for subsequent write commands so that the Switch need not wait for a Transfer Ready command to transfer data related to the subsequent write command (**see paragraph 0061 and col. 10, lines 58-65 and Col. 11, lines 36-38 of Beukema**).

21. As per **claims 19 and 28**, the combination of Mullendore and Beukema discloses “the apparatus of claim 1” [See rejection to claim 1 above], Mullendore discloses, “wherein the Switch **(150)** is further configured to, in the event the Switch does not have sufficient buffer space for the write command (**write 16MB**) (**see paragraph 0064**), to either: (i) generate a busy status signal to the initiating Host; (ii) placing the write command on a pending wait list (**paragraph 0064 discloses, “then switch 150 holds the RTT message until buffer resources become sufficient to receive the entire write data specified by the RTT message ”**) ; or (iii) forwarding the write command to the target (**see paragraph 0070**).

22. As per **claim 20**, the combination of Mullendore and Beukema discloses “the apparatus of claim 1” [See rejection to claim 1 above], Mullendore discloses, “wherein a first SAN **(360)** including the Switch (**switch A or B**); a second SAN **(365)** including a second Switch (**switch C or D**); and an inter-SAN network **(310)** connecting the first SAN and the second SAN (**see fig. 13**).

23. As per **claims 24, 27, 29, and 30**, Mullendore discloses an apparatus, comprising:
receiving a write command (**write 16MB**) at a switch, the write command specifying a host (**initiator 135**) identifier corresponding to a host and a target (**target 145**) identifier corresponding to a target (**paragraph 0027 discloses “the switch device typically includes a**

processor, a buffer, a first port for coupling to a low speed or TCP/IP based network link”.
see also fig. 4 and paragraph 0054);

a trapping mechanism (**paragraph 0046 discloses the buffer held the command within the switch**) configured to trap the write command frame if the write command frame designates a predetermined Host_ID (**the initiator, 135, ID**) and a predetermined target_ID (**the target, 145, ID**) (**each command within a fibre channel protocol discloses the sender and the target identity, as discloses in paragraph 0054**); and

a processor (**the processor within the switch, as discloses in paragraph 0027**) configured to process the trapped write commands (**see paragraphs 0029 and 0061, which discloses the processor within the switch is able partially transfer the write command**) and send a transfer ready command frame to the initiating Host before receiving the transfer ready command from the target (**see fig. 5 and paragraph 0064, which discloses “When Fast Write is disabled, RTT messages are passed transparently from target to initiator”**). Clearly, fig. 5, shows XFER_RDY 128KB being sent from the switch 150 before it is received at the initiator (base on the arrow). As paragraph 0064 discloses, “RTT messages are passed transparently from target to initiator”. This XFER_RDY 128KB is shown to be coming from the target), wherein the transfer ready command received from the target is suppressed (**see fig. 5 and paragraph 0072, which discloses putting the transfer ready command to an ‘end’**. The word ‘suppressed’ is being interpreted as to put and end or to come to a stop).

but fails to disclose expressly a frame having a header with an OX_ID and a RX_ID value and initializing either the OX_ID or RX_ID of the write command header and ‘modifying’ the originator exchange identifier (OX ID) of the write command ‘to include’ the initialized RX

ID value to generate a modified write command; and forwarding the modified write command to the target.

Paragraph 0018 of the applicant's specification discloses "As previously noted, the OX_ID field 32 and the RX_ID field 34 are each 16 bits wide and are used for identifying the originating Host and target device".

Similarly, Beukema discloses a data packet 712 of fig. 7 having routing header 716 and transport header 718, which are use to identify a source and a destination target; in the same way that a RX_ID is used to specifies a target. See col. 10, lines 58-65. In other words, OX-ID and RX_ID are being interpreted as addresses for a source and a destination. In regards to *initializing either the OX_ID or RX_ID of the write command header*, in col. 10, lines 49-50, Beukema discloses "Routers, also modify the packet's network header when the packet crosses a subnet boundary". Modifying is being interpreted as to initializing. Col. 11, lines 36-38 discloses, "The network header includes routing information, such as the destination IP address and other network routing information".

Mullendore et al. (US 2003/0185154) and Beukema et al. (US pat. 6,978,300) are analogous art because they are from the same field of endeavor of packet switching in a wide area network (WAN) and/or local area network (LAN).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify a congestion management systems and methods are provided to overcome head-of-line blocking issues resulting from slower-speed network links, such as low speed WAN links or links using a TCP/IP based storage protocol as described by Mullendore and a

mechanism by which modifications to components of the network fabric may be made without tearing down existing connections as taught by Beukema.

The motivation for doing so would have been because Beukema teaches, **“The method and apparatus provide a mechanism by which modifications to components of the network fabric may be made without tearing down existing connections. The apparatus and method facilitate such fabric management by placing send queues in a send queue drain state and suspending the send queues affected by changes to the network fabric while the modifications are being made. Once the modifications are complete, the send queues are place back into an operational state”** (see col. 2, lines 31-38).

Therefore, it would have been obvious to combine Beukema et al. (US pat. 6,978,300) with Mullendore et al. (US 2003/0185154) for the benefit of creating the apparatus to obtain the invention as specified in claims 24, 27, 29, and 30.

RELEVANT ART CITED BY THE EXAMINER

24. The following prior art made of record and not relied upon is cited to establish the level of skill in the applicant’s art and those arts considered reasonably pertinent to applicant’s disclosure. See **MPEP 707.05(c)**.

A great example of a switch in a SAN using Fibre Channel header to modifying a Receiver Exchange Identifier (responder identifier) is clearly shown by “Fibre Channel – Fabric Generic Requirements (FC-FG)”; see section 5.3 on page 13.

U.S. PATENT NUMBER

US 7,353,305; 7,277,431; 7,269,168; 7,237,045

CLOSING COMMENTS

Conclusion

a. STATUS OF CLAIMS IN THE APPLICATION

25. The following is a summary of the treatment and status of all claims in the application as recommended by **M.P.E.P. 707.07(i)**:

a(1) CLAIMS REJECTED IN THE APPLICATION

26. Per the instant office action, claims 1-3, 5-20, and 24-31 have received a final action on the merits.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

b. DIRECTION OF FUTURE CORRESPONDENCES

Art Unit: 2181

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernest Unelus whose telephone number is (571) 272-8596. The examiner can normally be reached on Monday to Friday 9:00 AM to 5:00 PM.

IMPORTANT NOTE

27. If attempts to reach the above noted Examiner by telephone is unsuccessful, the Examiner's supervisor, Mr. Alford Kindred, can be reached at the following telephone number: Area Code (571) 272-4037.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 23, 2008

Ernest Unelus
Examiner
Art Unit 2181

/Alford W. Kindred/
Supervisory Patent Examiner, Art Unit 2181

